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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/746,924
Filing Date: December 22, 2000
Appellant(s): PARUPUDI ET AL.

David S. Lee
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/19/04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The appellant submits that the claims under appeal do not stand or fall together.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

6,522,875	DOWLING	2-2003
6,343,291	GOLDMAN	1-2002

Fulton, Jennifer. "Computer Maintenance, Part 1 First Step: Spring Cleaning" TOGGLE (December 1999, pp. 2.

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-7, 9-21, 23- 30, 32-36, 38-39, 41-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,522,875 B1 (Dowling et al.) and U. S. Patent No. 6,343,291 B1 (Goldman).

Referring to claim 2, Dowling discloses acquiring applets, represented as the web applications, which can be downloaded, associated with a determined location (column 15, lines 33-36). Dowling discloses that once the digital data or applets are acquired based on a determined location, the portable local device is then allowed to interact with a location environment, wherein mobile unit can interact with a movie theater web pages that have information related to movie theaters within the determined location (column 4, lines 22-28). Dowling discloses downloading the applets into the mobile unit, and viewing the data through the output device, this viewing including locally executing these applets (column 15, lines 30-39), allowing for the user to interact with the web page. Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing

this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10). It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized structure, with a meaningful organization method, wherein the information can be traversed more efficiently and the information can be easily accessed (column 5, lines 37-40).

Referring to claim 3, Dowling and Goldman disclose accessing a database structure that is a hierarchical tree structure locally (Dowling, column 4,lines 41-45).

Referring to claim 4, Dowling and Goldman also disclose a central database server, serving as a source remote from the device, with the database structure being a hierarchical tree structure (Dowling, column 4, lines 33-35).

Referring to claim 5, Dowling and Goldman disclose accessing the remotely located information through a wireless connection, wherein the information includes database structures that are hierarchical trees (column 5, lines 66-67 and column 4, lines 33-35).

Referring to claim 6, Dowling and Goldman disclose receiving location information from multiple different location providers, the information represented as transmissions from the local broadcast domain entity and based on this transmission information, performing the acts of traversing and accessing, wherein accessing is done based on receiving information from the local broadcast domain and the act of traversing is possible when based on the location information the local broadcast entity (Dowling, reference number 150, Figure 1) is traversed to reach the Internet (Dowling, reference number 122, Figure 1) to receive the location information (Dowling, column 6, lines 48-65).

Referring to claim 7, as seen in Figure 1 of Dowling, of the means by which a mobile unit, without connection to any particular system, would access domain data, separate from the mobile unit (reference number 105 and 145, Figure 1), wherein the information would be received wirelessly from multiple different location providers the information represented as transmissions from the local broadcast domain entity and based on these transmission information, wherein accessing is done based on receiving information from the local broadcast domain and the act of traversing is possible when based on the location information the local broadcast entity (reference number 150, Figure 1) is traversed to reach the Internet (reference number 122, Figure 1) to receive the location information (column 6, lines 48-65).

Referring to claims 9 and 10, Dowling and Goldman disclose that the digital data comprises data used to render a Web page, wherein the user can interaction with this Web page (Dowling, column 1, lines 8-12).

Referring to claim 11, Dowling discloses pointers that reference software code that can be downloaded, the software coded represented as the HTML code which would be downloaded

in reference to the downloading of the web pages (column 4, lines 21-26), wherein as stated earlier by Dowling, the connection and hence the downloading from the server to the mobile device would be through a wireless connection (column 5, lines 66-67).

Referring to claim 12, Dowling discloses using pointers to access and load the software code on the device and executing the software code on the device, wherein displaying of the web pages involve execution of the corresponding HTML code (column 15, lines 17-42).

Referring to claims 13 and 42, Dowling discloses using pointers to access and load the software code on the device and executing the software code on the device (column 15, lines 20-24), wherein displaying of the web pages involve execution of the corresponding HTML code in the runtime environment, which would be the web browser, used to run the web page applications (column 15, lines 17-42).

Referring to claim 14, Dowling discloses that the digital data comprises applets, which has explained by Dowling is represented as the application data within the web pages, that are executed on the device (column 15, lines 30-36).

Referring to claim 15, Dowling discloses downloading the applets into the mobile unit, and viewing the data through the output device, this viewing including locally executing these applets (column 15, lines 30-39).

Referring to claim 16, Dowling discloses acquiring the digital data via the Internet through a wireless connection (column 5, lines 66-67 and column 6, lines 14-16).

Referring to claims 17, 18, 38, 39, 45 and 46, Dowling discloses a handheld portable computing device programmed with instructions to implement the method stated in claims 1, 31 and 40 (column 7, lines 20-25).

Referring to claims 19, Dowling discloses computer-readable media with computer readable instruction which would be used in the laptop and dash-mounted vehicle computers, wherein the instruction would carry out the methods as stated in claim1 (column 7, lines 22-25).

Referring to claim 20, Dowling discloses acquiring applets, represented as the web applications, which can be downloaded, associated with a determined location (column 15, lines 33-36). Dowling discloses downloading the applets into the mobile unit, and viewing the data through the output device, this viewing including locally executing these applets (column 15, lines 30-39), allowing for the user to interact with the web page. Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10). It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized

structure, with a meaningful organization method, wherein the information can be easily accessed (column 5, lines 37-40).

Referring to claims 21, 36 and 43, Dowling discloses maintaining a cache of the web application including any applets information, wherein the information can be cached for use on the device (column 15, lines 39-41).

Referring to claim 23, Dowling discloses a request or query used to identify particular web applications that are associated with the location (column 15, lines 33-36).

Referring to claim 24, Dowling discloses querying a server to ascertain applets that are associated with the location and that provide a location specific service (column 4, lines 21-30 and column 15, lines 33-36).

Referring to claim 25, Dowling discloses receiving a response from the server that contains digital data associated with services that are provided for that location (column 10, lines 13-38).

Referring to claims 26 and 34, Dowling discloses accessing web applications, applets represented as web pages, thereby inherently suggesting the presence of URLs that would be associated with this digital data (column 10, lines 34-37).

Referring to claim 27, Dowling discloses digital data that comprises applets or web applications as disclosed by Dowling, wherein these web applications are associated with the current location (column 15, lines 34-36).

Referring to claims 28, 29, Dowling discloses a handheld portable computing device programmed with instructions to implement the method stated in claim 20 (column 7, lines 20-25).

Referring to claim 30, Dowling discloses computer-readable media with computer readable instruction which would be used in the laptop and dash-mounted vehicle computers, wherein the instruction would carry out the methods as stated in claim 20 (column 7, lines 22-25).

Referring to claim 32, Dowling discloses determining the device's location and generating a service query that is configured to identify services that are associated with the location (column 4, lines 21-26). Dowling discloses the communication involving wireless connections, wherein any communication with the client/mobile unit and server would be through a wireless connection, as applied to any queries to the server (column 5, lines 66-67). Dowling discloses receiving a response from the server, which contains the digital data represented as web applications or applets that can be executed by the device, wherein the execution would be necessary to display the web page, and providing location specific service. Dowling also discloses locally executing the web applications to interact with a location environment. See column 15, lines 33-36. Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10). It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent

the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized structure, with a meaningful organization method, wherein the information can be traversed more efficiently and the information can be easily accessed (column 5, lines 37-40).

Referring to claim 33, Dowling discloses receiving location information from multiple different location providers, the information represented as transmissions from the local broadcast domain entity and based on this transmission information, determining the current location or the local broadcast domain (column 6, lines 48-65). Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10). It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the

service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized structure, with a meaningful organization method, wherein the information can be easily accessed (column 5, lines 37-40).

Referring to claim 35, Dowling discloses using digital signed applets and authenticating the digital data that is being accessed by the mobile unit, wherein this digital data can be web applications and web pages, wherein the display of these pages, involve the execution of these applications on the device (column 18, lines 28-35).

Referring to claim 41, Dowling discloses a means through which to wirelessly receive location information and ascertain a location associated with the location information, wherein as seen by Figure 1, the connection with a mobile unit is a wireless connection, through which the location information is acquired (column 6, lines 50-65). Dowling discloses means for receiving and managing applets or web applications that can be wirelessly accessed, the wireless connection being obvious for mobile units, and that pertain to a location and the web applications allowing the users to interact with the location environment through a mobile unit (column 15, lines 30-35). Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10).

It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized structure, with a meaningful organization method, wherein the information can be traversed more efficiently and the information can be easily accessed (column 5, lines 37-40).

Referring to claim 44, Dowling discloses establishing wireless communication with a network so that applets or web applications can be wirelessly received (column 5, lines 66-67).

Referring to claim 48, Dowling discloses a means through which to wirelessly receive location information and ascertain a location associated with the location information, wherein as seen by Figure 1, the connection with a mobile unit is a wireless connection, through which the location information is acquired (column 6, lines 50-65). Dowling discloses means for receiving and managing applets or web applications that can be wirelessly accessed, the wireless connection shown for mobile units on Figure 1 (reference number 105 and 145), and that pertain to a location and the web applications allowing the users to interact with the location environment through a mobile unit (column 15, lines 30-35). Dowling discloses using pointers to access and load the software code on the device and executing the software code on the device (column 15, lines 20-24), wherein displaying of the web pages involve execution of the corresponding HTML code in the runtime environment, which would be the web browser

(column 16, lines 30-35), used to run the web page applications based on information to interact with the location (column 15, lines 17-42). Dowling discloses maintain a cache of the web application including any applets information, wherein the information can be cached for use on the device (column 15, lines 39-41). Dowling discloses establishing wireless communication with a network so that applets or web applications can be wirelessly received (column 5, lines 66-67). Dowling discloses accessing a "list/database" containing information concerning physical and logical locations and accessing this information (column 11, lines 55-65). But Dowling does not disclose that these databases are hierarchical tree structures, wherein the nodes would be traversed to access the information concerning the device location, as stated in the claims. Goldman discloses creating and using an organized hierarchical structure with nodes representing location based information, wherein the tree would be traversed to access a specific node containing the information that is needed (column 2, lines 56-64 and column 9, lines 9-10). It would have been obvious for one skilled in the art, at the time of the invention to learn from Goldman to implement a hierarchical structure to represent the physical or logical locations, wherein information concerning the location of the device would be accessed by traversing the structure. Dowling discloses using some kind of database storage structure to store and access the information necessary to access and display the service information to a user. Goldman clearly teaches taking such a database and using a hierarchical structure, wherein this hierarchical structure would provide a better-organized structure, with a meaningful organization method, wherein the information can be traversed more efficiently and the information can be easily accessed (column 5, lines 37-40).

Claims 22 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dowling and Goldman as applied to claims 21 and 36, and further in view of "Computer Maintenance, Part 1 First Step: Spring Cleaning" (Jennifer Fulton).

Referring to claims 22 and 37, Dowling discloses downloading new information when the device changes location but Dowling does not disclose what is done with the old information that has been stored in cache (column 11, lines 19-22). Dowling and Goldman do not disclose means for removing the cache data when a device location changes, and certain data is not needed anymore, as stated in the claims. Fulton discusses how information, especially concerning web applications are removed from cache when they are not deemed necessary (page 2, column 1, lines 38-42 and column 2, lines 1-6). It would have been obvious for one skilled in the art, at the time of the invention to learn from Fulton to have a means for removing the cache that has been collected, when the device changes locations. Fulton discloses such a means for removing cache so that unnecessary information will not be present in a client system, such as the mobile unit of Dowling and Goldman's invention, wherein the unnecessary information must be removed in an effort to provide space for the new data that is downloaded as a result of the device changing location. Such a mobile unit, would greatly benefit from having such a removal system, leaving space for much needed information, especially concerning the mobile unit's current environment and the needs of its users. Hence, one skilled in the art, at the time of the invention would have been motivated to learn from Fulton to implement a means for removing unnecessary cache information, to provide more space for the new data that is downloaded and stored in cache when the device has changed its location.

(11) Response to Argument

Claims 2-7 and 9-19

With respect to Applicant's arguments that the combination of Dowling and Goldman is not based on adequate motivation to modify Dowling and further does not teach all of the features of the claim. As explained in the rejection, Dowling clearly contains every feature, wherein the location of a portable computing device is determined, a database is accessed for attaining the device location data, further acquiring the data related to the location, allowing the user to interact with the local environment, and wherein this would allow for interaction with the local environment based on the acquired digital data. These main features have been clearly pointed out as being disclosed in Dowling in all rejections of record, wherein the arguments do not contest that these main features have not been disclosed in a prior art. Dowling clearly has a storage mechanism for holding the physical or logical location data, wherein this data would be acquired and then displayed for further interaction with the user and the local environment. Dowling clearly discloses that to implement its functionalities, a memory with a list of data, representing the database or data structure, would be included. Dowling further teaches the use of database to store location data, including that map data or other location related information would be stored and later accessed. See column 11, lines 55-67 and column 12, lines 1-10. In general, a storage unit is clearly used to store location data in Dowling. With all the main features being disclosed in Dowling in addition to databases used for storage and accessing taught in Dowling, the only feature that has not been explicitly taught in Dowling is the backend structure of the database, wherein this database would be a hierarchical tree structure with multiple nodes that represent physical or logical locations and traversing at least one node on the tree structure to ascertain a location device. Goldman clearly discloses a hierarchical data

structure with multiple nodes that represent physical or logical locations (column 38, lines 30-60). Goldman further discloses that this database mechanism is created and a data model is formed to organize data, wherein this organization would be beneficial to such a system as Dowling that deals with large amounts of data. Goldman uses its database structure mechanism to show examples of implementations for this data structure, wherein clearly this data structure must be combined with an implementation or system to use as an embodiment. In one example, Goldman specifically refers to nodes that represent location data, and wherein the hierarchical structure refers to nodes that represent one general geographic location, and further child nodes that are more specific geographic locations under the more general parent geographic node. Goldman further explains how the multiple nodes of this tree would be traversed, wherein as shown in Figure 37, the parent node "Colorado" would be accessed and from this the traversal can move to the areas specific to "Colorado", the areas being further child nodes that are "Co Springs" or "Denver". This example clearly shows how this hierarchical tree structure stores physical or logical location nodes, and this tree would be traversed to access these location and location data. See column 38, lines 30-60. In Figure 37 of Goldman, the tree structure further features devices such as "Routers", "Servers" under specific locations, wherein this further teaches that location data is used to access further devices that are associated with these locations, which is analogous to the teachings of Dowling that is based on determining the location of a device based on geographic data. The arguments and the disclosure of Goldman (column 41, lines 34-35) both point out that Goldman is beneficial for creating a information model that is both an easy way to organize and access an information repository, wherein this is clearly a motivation that such a system as Dowling with large amounts of data can rely on to

implement Goldman's data structure. Goldman further uses its data structure to lay out an example much like Dowling's system, by explaining how this data structure can be used to hold hierarchical location nodes that can be traversed to extract specific node information based on location of a device (Figure 37 and column 38, lines 50-60). Such a clear layout, along with proper motivation for creating a better efficient data structure would make for the combination of Dowling and Goldman to be valid and based on adequate motivation.

With respect to Applicant's arguments that Goldman's disclose viewing records of the database. Goldman may discuss being able to view the items of the database, but regardless, the backend data structure or information model used by Goldman has been created and an implementation has been further taught for using this data structure to store and access geographic location nodes. The examples of the geographic location nodes does not explicitly discuss the user being able to view the data structure, but the structure of the database that Goldman teaches is useful to Dowling and can be combined to attain the system discussed above. Furthermore, Dowling and the present claims do rely on the "records" of the database or the nodes of the hierarchical structure to view data, wherein the data that is viewed in Dowling, and disclosed in the claims is data that is accessed from the database.

Claims 20-30

With respect to Applicant's arguments that the combination of Dowling and Goldman is not based on adequate motivation to modify Dowling and further does not teach all of the features of the claim. As explained in the rejection, Dowling clearly contains every feature, wherein the location of a portable computing device is determined, a database is accessed for attaining the device location data, further acquiring the data related to the location, allowing the

user to interact with the local environment, and wherein this would allow for interaction with the local environment based on the acquired digital data. These main features have been clearly pointed out as being disclosed in Dowling in all rejections of record, wherein the arguments do not contest that these main features have not been disclosed in a prior art. Dowling clearly has a storage mechanism for holding the physical or logical location data, wherein this data would be acquired and then displayed for further interaction with the user and the local environment. Dowling clearly discloses that to implement its functionalities, a memory with a list of data, representing the database or data structure, would be included. Dowling further teaches the use of database to store location data, including that map data or other location related information would be stored and later accessed. See column 11, lines 55-67 and column 12, lines 1-10. In general, a storage unit is clearly used to store location data in Dowling. With all the main features being disclosed in Dowling in addition to databases used for storage and accessing taught in Dowling, the only feature that has not been explicitly taught in Dowling is the backend structure of the database, wherein this database would be a hierarchical tree structure with multiple nodes that represent physical or logical locations and traversing at least one node on the tree structure to ascertain a location device. Goldman clearly discloses a hierarchical data structure with multiple nodes that represent physical or logical locations (column 38, lines 30-60). Goldman further discloses that this database mechanism is created and a data model is formed to organize data, wherein this organization would be beneficial to such a system as Dowling that deals with large amounts of data. Goldman uses its database structure mechanism to show examples of implementations for this data structure, wherein clearly this data structure must be combined with an implementation or system to use as an embodiment. In one example,

Goldman specifically refers to nodes that represent location data, and wherein the hierarchical structure refers to nodes that represent one general geographic location, and further child nodes that are more specific geographic locations under the more general parent geographic node. Goldman further explains how the multiple nodes of this tree would be traversed, wherein as shown in Figure 37, the parent node "Colorado" would be accessed and from this the traversal can move to the areas specific to "Colorado", the areas being further child nodes that are "Co Springs" or "Denver". This example clearly shows how this hierarchical tree structure stores physical or logical location nodes, and this tree would be traversed to access these location and location data. See column 38, lines 30-60. In Figure 37 of Goldman, the tree structure further features devices such as "Routers", "Servers" under specific locations, wherein this further teaches that location data is used to access further devices that are associated with these locations, which is analogous to the teachings of Dowling that is based on determining the location of a device based on geographic data. The arguments and the disclosure of Goldman (column 41, lines 34-35) both point out that Goldman is beneficial for creating a information model that is both an easy way to organize and access an information repository, wherein this is clearly a motivation that such a system as Dowling with large amounts of data can rely on to implement Goldman's data structure. Goldman further uses its data structure to lay out an example much like Dowling's system, by explaining how this data structure can be used to hold hierarchical location nodes that can be traversed to extract specific node information based on location of a device (Figure 37 and column 38, lines 50-60). Such a clear layout, along with proper motivation for creating a better efficient data structure would make for the combination of Dowling and Goldman to be valid and based on adequate motivation.

With respect to Applicant's arguments that Goldman's disclose viewing records of the database. Goldman may discuss being able to view the items of the database, but regardless, the backend data structure or information model used by Goldman has been created and an implementation has been further taught for using this data structure to store and access geographic location nodes. The examples of the geographic location nodes does not explicitly discuss the user being able to view the data structure, but the structure of the database that Goldman teaches is useful to Dowling and can be combined to attain the system discussed above. Furthermore, Dowling and the present claims do rely on the "records" of the database or the nodes of the hierarchical structure to view data, wherein the data that is viewed in Dowling, and disclosed in the claims is data that is accessed from the database.

Claims 32-39

With respect to Applicant's arguments that the combination of Dowling and Goldman is not based on adequate motivation to modify Dowling and further does not teach all of the features of the claim. As explained in the rejection, Dowling clearly contains every feature, wherein the location of a portable computing device is determined, a database is accessed for attaining the device location data, further acquiring the data related to the location, allowing the user to interact with the local environment, and wherein this would allow for interaction with the local environment based on the acquired digital data. These main features have been clearly pointed out as being disclosed in Dowling in all rejections of record, wherein the arguments do not contest that these main features have not been disclosed in a prior art. Dowling clearly has a storage mechanism for holding the physical or logical location data, wherein this data would be acquired and then displayed for further interaction with the user and the local environment.

Dowling clearly discloses that to implement its functionalities, a memory with a list of data, representing the database or data structure, would be included. Dowling further teaches the use of database to store location data, including that map data or other location related information would be stored and later accessed. See column 11, lines 55-67 and column 12, lines 1-10. In general, a storage unit is clearly used to store location data in Dowling. With all the main features being disclosed in Dowling in addition to databases used for storage and accessing taught in Dowling, the only feature that has not been explicitly taught in Dowling is the backend structure of the database, wherein this database would be a hierarchical tree structure with multiple nodes that represent physical or logical locations and traversing at least one node on the tree structure to ascertain a location device. Goldman clearly discloses a hierarchical data structure with multiple nodes that represent physical or logical locations (column 38, lines 30-60). Goldman further discloses that this database mechanism is created and a data model is formed to organize data, wherein this organization would be beneficial to such a system as Dowling that deals with large amounts of data. Goldman uses its database structure mechanism to show examples of implementations for this data structure, wherein clearly this data structure must be combined with an implementation or system to use as an embodiment. In one example, Goldman specifically refers to nodes that represent location data, and wherein the hierarchical structure refers to nodes that represent one general geographic location, and further child nodes that are more specific geographic locations under the more general parent geographic node. Goldman further explains how the multiple nodes of this tree would be traversed, wherein as shown in Figure 37, the parent node "Colorado" would be accessed and from this the traversal can move to the areas specific to "Colorado", the areas being further child nodes that are "Co

Springs" or "Denver". This example clearly shows how this hierarchical tree structure stores physical or logical location nodes, and this tree would be traversed to access these location and location data. See column 38, lines 30-60. In Figure 37 of Goldman, the tree structure further features devices such as "Routers", "Servers" under specific locations, wherein this further teaches that location data is used to access further devices that are associated with these locations, which is analogous to the teachings of Dowling that is based on determining the location of a device based on geographic data. The arguments and the disclosure of Goldman (column 41, lines 34-35) both point out that Goldman is beneficial for creating a information model that is both an easy way to organize and access an information repository, wherein this is clearly a motivation that such a system as Dowling with large amounts of data can rely on to implement Goldman's data structure. Goldman further uses its data structure to lay out an example much like Dowling's system, by explaining how this data structure can be used to hold hierarchical location nodes that can be traversed to extract specific node information based on location of a device (Figure 37 and column 38, lines 50-60). Such a clear layout, along with proper motivation for creating a better efficient data structure would make for the combination of Dowling and Goldman to be valid and based on adequate motivation.

With respect to Applicant's arguments that Goldman's disclose viewing records of the database. Goldman may discuss being able to view the items of the database, but regardless, the backend data structure or information model used by Goldman has been created and an implementation has been further taught for using this data structure to store and access geographic location nodes. The examples of the geographic location nodes does not explicitly discuss the user being able to view the data structure, but the structure of the database that

Goldman teaches is useful to Dowling and can be combined to attain the system discussed above. Furthermore, Dowling and the present claims do rely on the "records" of the database or the nodes of the hierarchical structure to view data, wherein the data that is viewed in Dowling, and disclosed in the claims is data that is accessed from the database.

Claims 41-46

With respect to Applicant's arguments that the combination of Dowling and Goldman is not based on adequate motivation to modify Dowling and further does not teach all of the features of the claim. As explained in the rejection, Dowling clearly contains every feature, wherein the location of a portable computing device is determined, a database is accessed for attaining the device location data, further acquiring the data related to the location, allowing the user to interact with the local environment, and wherein this would allow for interaction with the local environment based on the acquired digital data. These main features have been clearly pointed out as being disclosed in Dowling in all rejections of record, wherein the arguments do not contest that these main features have not been disclosed in a prior art. Dowling clearly has a storage mechanism for holding the physical or logical location data, wherein this data would be acquired and then displayed for further interaction with the user and the local environment. Dowling clearly discloses that to implement its functionalities, a memory with a list of data, representing the database or data structure, would be included. Dowling further teaches the use of database to store location data, including that map data or other location related information would be stored and later accessed. See column 11, lines 55-67 and column 12, lines 1-10. In general, a storage unit is clearly used to store location data in Dowling. With all the main features being disclosed in Dowling in addition to databases used for storage and accessing

taught in Dowling, the only feature that has not been explicitly taught in Dowling is the backend structure of the database, wherein this database would be a hierarchical tree structure with multiple nodes that represent physical or logical locations and traversing at least one node on the tree structure to ascertain a location device. Goldman clearly discloses a hierarchical data structure with multiple nodes that represent physical or logical locations (column 38, lines 30-60). Goldman further discloses that this database mechanism is created and a data model is formed to organize data, wherein this organization would be beneficial to such a system as Dowling that deals with large amounts of data. Goldman uses its database structure mechanism to show examples of implementations for this data structure, wherein clearly this data structure must be combined with an implementation or system to use as an embodiment. In one example, Goldman specifically refers to nodes that represent location data, and wherein the hierarchical structure refers to nodes that represent one general geographic location, and further child nodes that are more specific geographic locations under the more general parent geographic node. Goldman further explains how the multiple nodes of this tree would be traversed, wherein as shown in Figure 37, the parent node "Colorado" would be accessed and from this the traversal can move to the areas specific to "Colorado", the areas being further child nodes that are "Co Springs" or "Denver". This example clearly shows how this hierarchical tree structure stores physical or logical location nodes, and this tree would be traversed to access these location and location data. See column 38, lines 30-60. In Figure 37 of Goldman, the tree structure further features devices such as "Routers", "Servers" under specific locations, wherein this further teaches that location data is used to access further devices that are associated with these locations, which is analogous to the teachings of Dowling that is based on determining the

location of a device based on geographic data. The arguments and the disclosure of Goldman (column 41, lines 34-35) both point out that Goldman is beneficial for creating a information model that is both an easy way to organize and access an information repository, wherein this is clearly a motivation that such a system as Dowling with large amounts of data can rely on to implement Goldman's data structure. Goldman further uses its data structure to lay out an example much like Dowling's system, by explaining how this data structure can be used to hold hierarchical location nodes that can be traversed to extract specific node information based on location of a device (Figure 37 and column 38, lines 50-60). Such a clear layout, along with proper motivation for creating a better efficient data structure would make for the combination of Dowling and Goldman to be valid and based on adequate motivation.

With respect to Applicant's arguments that Goldman's disclose viewing records of the database. Goldman may discuss being able to view the items of the database, but regardless, the backend data structure or information model used by Goldman has been created and an implementation has been further taught for using this data structure to store and access geographic location nodes. The examples of the geographic location nodes does not explicitly discuss the user being able to view the data structure, but the structure of the database that Goldman teaches is useful to Dowling and can be combined to attain the system discussed above. Furthermore, Dowling and the present claims do rely on the "records" of the database or the nodes of the hierarchical structure to view data, wherein the data that is viewed in Dowling, and disclosed in the claims is data that is accessed from the database.

Claim 48

With respect to Applicant's arguments that the combination of Dowling and Goldman is not based on adequate motivation to modify Dowling and further does not teach all of the features of the claim. As explained in the rejection, Dowling clearly contains every feature, wherein the location of a portable computing device is determined, a database is accessed for attaining the device location data, further acquiring the data related to the location, allowing the user to interact with the local environment, and wherein this would allow for interaction with the local environment based on the acquired digital data. These main features have been clearly pointed out as being disclosed in Dowling in all rejections of record, wherein the arguments do not contest that these main features have not been disclosed in a prior art. Dowling clearly has a storage mechanism for holding the physical or logical location data, wherein this data would be acquired and then displayed for further interaction with the user and the local environment. Dowling clearly discloses that to implement its functionalities, a memory with a list of data, representing the database or data structure, would be included. Dowling further teaches the use of database to store location data, including that map data or other location related information would be stored and later accessed. See column 11, lines 55-67 and column 12, lines 1-10. In general, a storage unit is clearly used to store location data in Dowling. With all the main features being disclosed in Dowling in addition to databases used for storage and accessing taught in Dowling, the only feature that has not been explicitly taught in Dowling is the backend structure of the database, wherein this database would be a hierarchical tree structure with multiple nodes that represent physical or logical locations and traversing at least one node on the tree structure to ascertain a location device. Goldman clearly discloses a hierarchical data

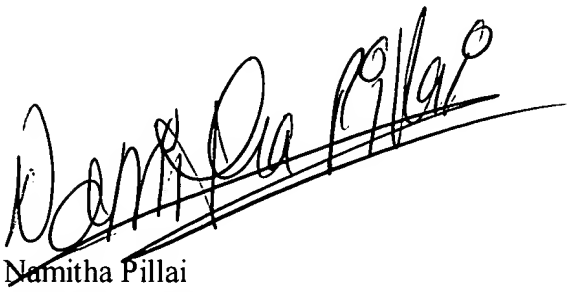
structure with multiple nodes that represent physical or logical locations (column 38, lines 30-60). Goldman further discloses that this database mechanism is created and a data model is formed to organize data, wherein this organization would be beneficial to such a system as Dowling that deals with large amounts of data. Goldman uses its database structure mechanism to show examples of implementations for this data structure, wherein clearly this data structure must be combined with an implementation or system to use as an embodiment. In one example, Goldman specifically refers to nodes that represent location data, and wherein the hierarchical structure refers to nodes that represent one general geographic location, and further child nodes that are more specific geographic locations under the more general parent geographic node. Goldman further explains how the multiple nodes of this tree would be traversed, wherein as shown in Figure 37, the parent node "Colorado" would be accessed and from this the traversal can move to the areas specific to "Colorado", the areas being further child nodes that are "Co Springs" or "Denver". This example clearly shows how this hierarchical tree structure stores physical or logical location nodes, and this tree would be traversed to access these location and location data. See column 38, lines 30-60. In Figure 37 of Goldman, the tree structure further features devices such as "Routers", "Servers" under specific locations, wherein this further teaches that location data is used to access further devices that are associated with these locations, which is analogous to the teachings of Dowling that is based on determining the location of a device based on geographic data. The arguments and the disclosure of Goldman (column 41, lines 34-35) both point out that Goldman is beneficial for creating a information model that is both an easy way to organize and access an information repository, wherein this is clearly a motivation that such a system as Dowling with large amounts of data can rely on to

implement Goldman's data structure. Goldman further uses its data structure to lay out an example much like Dowling's system, by explaining how this data structure can be used to hold hierarchical location nodes that can be traversed to extract specific node information based on location of a device (Figure 37 and column 38, lines 50-60). Such a clear layout, along with proper motivation for creating a better efficient data structure would make for the combination of Dowling and Goldman to be valid and based on adequate motivation.

With respect to Applicant's arguments that Goldman's disclose viewing records of the database. Goldman may discuss being able to view the items of the database, but regardless, the backend data structure or information model used by Goldman has been created and an implementation has been further taught for using this data structure to store and access geographic location nodes. The examples of the geographic location nodes does not explicitly discuss the user being able to view the data structure, but the structure of the database that Goldman teaches is useful to Dowling and can be combined to attain the system discussed above. Furthermore, Dowling and the present claims do rely on the "records" of the database or the nodes of the hierarchical structure to view data, wherein the data that is viewed in Dowling, and disclosed in the claims is data that is accessed from the database.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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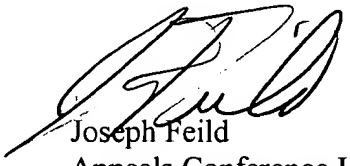

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